Augmented Critical Scenario Method: Analysing stakeholders' achievement of their objectives within future scenarios

Prof. George Cairns

Centre for Sustainable Organisations and Work, RMIT University, Melbourne, Australia

Email: george.cairns@rmit.edu.au

Prof. George Wright

Warwick Business School, Warwick, UK

Email: george.wright@wbs.ac.uk

Augmented Critical Scenario Method: Analysing stakeholders' achievement of their objectives within future scenarios

ABSTRACT *This paper presents a conceptual model for scenario analysis that combines the attributes of critical scenario method (CSM) and decision analysis in order to offer a further 'augmented method' of scenario analysis. CSM as currently presented offers a framework for considering multiple stakeholders' interests, objectives and status across scenarios, whilst decision analysis supports a single organization's strategic scenario analysis. Here, we develop a power-based analysis of selected stakeholders' degree of achievement of their individual strategic objectives within a particular scenario - and consider the impact on other affected stakeholders. We posit that this provides a more nuanced analysis of the course of future events - that can serve both in the field of practice and in the educational arena.*

Keywords: scenario, volatility, instability, risk, *phronēsis*, sustainable

INTRODUCTION

In this paper, we present a conceptual model for a further 'augmented method' (Wright and Cairns, 2011) of scenario analysis, of relevance in considering futures for complex and ambiguous issues that: involve multiple stakeholders; are transnational in nature, and; have impacts that should most appropriately be considered in social and ecological as well as economic terms. We base this on 'critical scenario method' (CSM) (Cairns et al., 2010) that is designed to support identification of the 'broad' (Freeman, 1994) range of stakeholders. CSM applies Flyvbjerg's (2001, 2003) value-rational question framework to explore the 'desirability' or otherwise of different possible futures for each stakeholder group, and to question what if anything should be done about it. As such, it requires explicit consideration of mechanisms of power. However, it sets outcomes within a basic winner/loser choice and, as a result, it is not sensitive to different degrees of 'winning' or 'losing' for individual stakeholders across scenarios, or to the relative power of multiple stakeholders within each scenario. Here, we augment the CSM model through introducing decision analysis (Wright and Cairns, 2011), presenting a more nuanced analytic framework that provides a weighted classification of relative power bases within and of achievement of objectives across scenarios, enabling consideration of the power-based, self-interested actions of selected stakeholders on the situations of others. We base our development on the CSM example of Cairns (2012) on the ship breaking industry of Bangladesh in the global context. In the limited space of this paper, we provide only an illustrative example using a

restricted number of stakeholders and we focus on the key elements of the proposed method which will be enhanced to show the full complexity and analytic potential in future papers.

CSM AS A VALUE-RATIONAL ANALYTIC FRAMEWORK

In the CSM model, a set of four possible and plausible scenarios is developed around a 'key focal issue' of concern following the 'basic method' (Wright & Cairns, 2011). The issue is analysed by exploring the 'driving forces' – political, economic, social, technological, ecological and legal (PESTEL) factors – that will shape its emergent future. The driving forces are then subject to causal/chronological analysis through 'clustering' in order to determine a smaller number of 'higher level factors'. Each of these factors is then debated individually in order to describe in very broad terms two 'extreme outcomes', not necessarily on a continuum of 'best'to 'worst'. In relation to the ship breaking industry, both outcomes for some factors might remain fairly negative. From an impact/uncertainty analysis, the two factors (A and B) that combine the greatest perceived impact combined with the greatest perceived uncertainty as to what that impact will be are elicited. Four scenarios are constructed around the combination of extreme outcomes of factors A and B (A1/B1; A1/B2; A2/B1; A2/B2). For the Bangladesh ship breaking industry futures, Cairns (2012) proposes factors A and B, respectively, as: 'Effectiveness of global regulation', and 'Commitment to "green practices" in Bangladesh'. He then outlines four possible and plausible futures in terms of: 'Global Cooperation' – global regulation combined with Bangladesh commitment (A1/B1); 'World Divided' – effective global control without Bangladesh commitment (A1/B2); 'Bangladesh Goes Alone' – shut down and transfer to other LDCs without global control (A2/B1), and; 'Business-as-usual' – dirty beaching continues unabated (A2/B2).

CSM prompts interrogation of each of the scenarios from the perspective of the 'broad' range of stakeholders (Freeman, 1994) using Flyvbjerg's (2001, 2003) framework for phronetic social inquiry. This requires consideration of the likely responses in each scenario by the different stakeholders to four 'value rational' questions, namely: 'Where are we going?', 'Is this development desirable?',

'What, if anything, should we do about it?', and 'Who gains and who loses, and by which mechanisms of power?'In the extant literature (e.g. Cairns et al., 2010), the answer to the first question is assumed to be answered by the title and brief outline of each of four scenarios – presenting four different possibilities that are applicable to all stakeholders. The answers to the second and third questions are set out in a basic tabular format that summarises them for each stakeholder group for each scenario in terms of a projected impact (Is this desirable?) and response (What should we do?). Here, the 'we' is defined as the particular stakeholder group for whom the question is being considered. The final question is answered in summary form that considers all stakeholders and that assesses which groups are 'major winners', which 'lose out' and 'who holds key power'. In his paper, Cairns (2012) presents this tabular summary for nine illustrative stakeholder groups. Here, we develop a more focussed and nuanced application of CSM to explore the relationship between selected stakeholders' objectives and the impact of their (non-)achievement on other stakeholders' objectives or aspirations. The ranking of the relative power of all stakeholders within scenarios and of the achievement of objective for each stakeholder across scenarios enables a deeper understanding of inter-stakeholder relationships. It also offers the potential of a dynamic model for assessing the impact of any possible change in prevailing power structures and of the achievement of alternative stakeholder objectives. This could be used to support organizational strategic planning; either for the self-interest of the stakeholder or to inform advocacy and action by concerned stakeholders in support of others who may be largely powerless and excluded.

EMBEDDING DECISION ANALYSIS IN THE CSM MODEL

Application of decision analysis in a scenario exercise is developed by Wright and Cairns (2011) to support an individual organization's assessment of alternative scenarios in relation to multiple strategies that it has identified in support of its key strategic aims. In proposing the application of a decision analysis model within a CSM framework, we extend our consideration from the single organization to multiple stakeholder groups, the relative power bases of each within and across scenarios, and the impact of the more powerful on the less powerful and excluded. Additionally,

where extant CSM considers generic stakeholder groupings, we develop it to engage in more detailed analysis and discussion in relation to specific organizations and societal groups.

In embeding decision analysis, we follow the general outline of Wright and Cairns (2011) but abbreviate some sections due to space limitations here, and indicate variations to others in order to bring in the CSM aspect, as follows:

Stage 1: Formulate scenarios

Our expanded scenario outlines based upon Cairns' (2012) work are as follows:

Scenario 1: Global Cooperation – There is international agreement and action to require disposal of redundant ships by the use of 'green' breaking, brought about by the combined actions of a wide variety of stakeholders, across and within nations. At the international level, there is commitment by the International Maritime Organization (IMO), ship builders and owners, insurance brokers, countries of registration, etc. to enforce regulation. At the same time, there is commitment to the prevention of beaching by the governments of India and Pakistan and investment in 'green' technologies, with inward investment and/or international aid as well as local finance for Bangladesh.

Scenario 2: A World Divided – There is concerted action by environmental pressure groups, developed world governments, transnational agencies and others to bring about an end to the practice of beaching. This prevents major shipping companies from selling off ships without retaining control over their final dismantling. Bangladesh, however, fails to take action to close down its yards and, over time, the yards dismantle a diminishing supply of ships from unregistered sources.

Scenario 3: Bangladesh Goes Alone – Under pressure from both international NGOs and local pressure groups such as Young Power for Social Action (YPSA) and the Bangladesh Environmental Lawyers Association (BELA), the Bangladesh government commits to legislation to ban the beaching and dismantling of ships. However, despite court orders to the contrary, redundant ships continue to be beached for breaking in India, Pakistan turns a blind eye, and new operations start up in Africa. With the IMO remaining a 'toothless tiger' and registration states showing no desire to intervene, the practice of beaching persists in its worst form in these other locations.

Scenario 4: Business as Usual – Nothing changes. There is an expressed desire to put an end to beaching and breaking, but there is no effective international framework to prevent it.

Stage 2: Formulate the objectives that you wish to achieve in your strategic actions

In this section, we address the objectives of three selected stakeholder organizations rather than a single entity. For our illustrative purposes, we posit the following groups, based on fact but not real:
GlobeTrade: a global shipping company with the key objective of remaining competitive, but in volatile financial conditions and uncertain international trade, and being watchful of a necessary CSR agenda.
GreenWorld: an international environmental NGO with the single key objective of closing down dirty ship breaking in all countries.
Workers: those that provide ship breaking labour in one of the major yards in Bangladesh.
On this basis, we vary the application of the further sections of the decision analysis framework, to move from discussion only of the focal organization and its objectives to consideration of the inter-relatedness of these three and their separate objectives and aspirations.

Stage 3: Consider alternative strategies for each group

At this point, Wright and Cairns (2011) consider strategy design by the focal organization for review in relation to the scenarios. Here, we ponder each group's strategic options for consideration in relation to the different scenarios and to each other. We construct these based upon our extensive reading of extant literature and media reports on the subject of discussion, global ship breaking.

For *GlobeTrade*, the strategic options are considered to be:
i) Order new efficient ships and dispose of old ships directly to 'green' breakers
ii) Order new efficient ships and dispose of old ships on an open market, to end life on dirty beaches

iii) Keep ships until end of viable life then dispose of them on open market, to dirty beaches

For *GreenWorld*, we consider the single strategic option to be:

iv) Advocate for green ship breaking globally and the closure of all dirty beaching yards

Finally, we see the *Workers* as having no real strategic options, but as having aspiration options:

v) Maintain employment day-to-day at all costs

vi) Maintain jobs whilst improving health and safety conditions where possible

vii) Focus on long-term health and safety for future generations

Stage 4: For each stakeholder rank each strategic option (aspiration) against each scenario from best to worst

In this stage, Wright and Cairns (2011) explore how each objective for the single organization is ranked against each strategy option against each scenario. In this short paper, we modify and enhance this stage to evaluate the degree of achievement of a desired outcome (either by the exercise of a strategic option or by simple achievement of an aspiration) for each stakeholder ranked against each scenario. This is done using a combination of 'intuitive logics' (Jungermann and Thuring, 1987) and extensive research and reading on the ship breaking industry. For each stakeholder, the 'best' achieved outcome for each scenario is ranked "1", the 'worst' ranked "4" (see Table 1).

INSERT TABLE 1 ABOUT HERE

These rankings, from 1- 4, for each stakeholder, may be read as addressing Flyvbjerg's (2001) question, 'Is this development desirable?', where 1 = 'most yes' and 4 = 'most no'.

Stage 5: Rank the relative power bases of all stakeholders within each scenario

We now consider the relative power-bases of each of the stakeholder groups – as evidenced *in the present day* - within each scenario. What we document is an indication of each group's current ability

to directly intervene and so impact the unfolding of events within a particular scenario and thereby, not just its own future but that of the other groups under consideration. Here, we draw upon the 'stakeholder analysis matrix' (Wright and Cairns, 2011, p.92), and suggest that 'players' that have both high power and a high level of interest will rank higher than 'context setters' who hold latent power but who lack current interest, and that this group will rank higher than 'subjects' who may have a strong interest but who lack power. Here, we judge that *Workers* will sit in the subjects group across all scenarios, lacking access to power in the global arena. We also posit that both *GlobeTrade* and *GreenWorld* may be second-level players, with different levels of relative power to influence key players such as the IMO and governments across scenarios. As such, we posit the relative power bases (within each scenario) as in Table 2, where '1' indicates the most powerful and '3' the least powerful.

INSERT TABLE 2 ABOUT HERE

Stage 6: Compute the objective/power rankings for stakeholdersacross scenarios

Next, we consider how the (non-)achievement of a stakeholder's individual objectives from the present day to the future outlined in each scenario might provoke the exercise of that stakeholder's power, either (i) in support of achievement or (ii) to recover from the worsened situation within a particular scenario. Recall that Tables 1 and 2 capture the basic indicators of (non-)achievement of objectives and relative power bases. In table 3, we compute an 'objective/power' measure that is the figure in each objective/scenario cell of Table 1 minus the figure in the relevant power index cell in Table 2. The resultant objective/power indices are detailed in Table 3.

INSERT TABLE 3 ABOUT HERE

Where this calculation shows a positive number, e.g. '4-1 = +3', this indicates that a stakeholder with power is not achieving this particular strategic objective. If this is the primary objective of the stakeholder, set within an unfavourable scenario, then she/he is likely to seek to exercise power in

order to support achieving that objective; i.e. seeking to change direction to a more favourable future. If the calculation yields a negative number, e.g. '1-4 = -3', this indicates that the stakeholder is very unlikely to be able to mobilise her/his very limited power to satisfy an objective that is of great value to her/him. Calculations that show sums at or around zero indicate either that, a) a stakeholder with high power has already achieved her/his objective (1-1 = 0), or b) that a stakeholder with low power is unlikely to be able to pursue an objective that is not favourably aligned with this scenario (4-4 = 0). The figures that we derive here give us more finely-tuned set of indicators in response to Flyvbjerg's (2001) question of 'who gains and who loses and by which mechanisms of power?' than the binary winners/losers listings of Cairns (2012).

DISCUSSION

We have pointed to the implications of the objective/power index for the particular stakeholder. However, we now seek to explain the functioning of this form of 'critical scenario decision analysis' (CSDA) in analysing complex, inter-stakeholder relationships and strategic decision making in support of the objectives of others. This brings us to consideration of Flybjerg's remaining question, 'what if anything should we do about it?' After consideration of the range of possible and plausible futures that might emerge and the play out of each of the strategies or aspirations of the various stakeholders in the global context, we turn to consideration of the inter-relationship of one group's strategy with another's future. From a phronetic, moral/ethical perspective, the answer to Flyvbjerg's question will be informed conceptually by strategies developed by power-holding organizations and institutions grounded in consideration of sustainability, defined in social, ecological and economic terms. By this, we do not refer to the type of 'greenwash' strategies that are proclaimed by organizations that are superficially committed to corporate social responsibility (CSR), but whose actual operations do not align with their proclaimed direction.

Developed world ship owners can most likely develop and pursue alternative strategies for ship disposal, as we have indicated for *GlobeTrade*. These will be informed and constrained by internal priorities and external factors: international legal frameworks, political decisions and, to some extent, societal pressures. In addition, international NGOs like *GreenWorld* have the capability of developing and pursuing strategies, sometimes with success over multinational businesses, as with Greenpeace and Shell in relation to the Brent Spar oil platform (Kirby, 1998). In contrast to Wright and Cairns' decision analysis example in which the organization makes strategy in order to respond to different scenarios, here the key international stakeholders must be considered as setting strategies that are both responsive to different futures for their own benefit and setting the ground for how others will be impacted within these different scenarios. We posit that the Bangladesh *Worker* stakeholders' have little or no capability to set strategy. However, we acknowledge that they have aspirations that will either be met or destroyed by the actions of others.

In the example of the Business-As-Usual scenario, if *GlobeTrade* wishes to follow a strategy of ship replacement and green disposal (objective/power index = +3), then it is likely to be seeking to exercise power in order to steer the future away from this scenario towards the Global Cooperation scenario (objective/power index = -1). Let us also posit that the organization does this for broad sustainability reasons, rather than for its own internal purposes. At the same time, the indices for *GreenWorld* show that it is likely to align with *GlobeTrade* in support of such a direction. However, if the key aspiration of the Bangladesh *Workers* is for jobs at any cost [objective (v) in Table 1], then this group – who are probably being acclaimed as the major beneficiaries of *GreenWorld'*s actions in support of green breaking – will likely be powerless to achieve this aim (objective/power index = -2). If we consider the overall socio-economic status of the Bangladesh yard workers in the present; with no employment contracts, no security of employment, no trade union support and no real options for alternative employment; we can see that 'jobs at any cost' is likely to be a key aspiration. Here, the 'good' intentions of *GlobeTrade* and *GreenWorld* might well lead to unintended consequences of loss of livelihood.

Similar tensions and issues can be identified between stakeholders and across scenarios. If *GlobeTrade* sees that its future security requires it to keep ships for a longer period then sell them on the open market for the highest price [objective (iii) in Table 1], it is likely to mobilise its power in opposition to *GreenWorld* [objective (iv) in Table 1] in order to seek to avoid the unfolding of the Global Cooperation scenario. In the meantime, if the *Workers* seek long-term health and safety, their aspirations will rest on the shoulders of *GreenWorld,* if they are to have a chance of these aspirations being achieved (objective/power index = -2).

CONCLUSIONS

The model of decision analysis that we have proposed and illustrated here has the potential, in theory, to enable a more nuanced analysis of the status of individual stakeholder groupings within and across scenarios. It incorporates the core elements of Wright and Cairns' (2011) published models of scenario-based decision analysis and critical scenario method (CSM) which have established foundations, respectively, in the literature on systematic strategy analysis (Goodwin and Wright, 2001, 2009) and application of Aristotelian phronesis as a mode of social inquiry (Flyvbjerg, 2001, 2003). The illustrative model presented here incorporates rankings of the (non-)achievement of key objective/interest and strength of the power base for different stakeholder groups based upon qualitative assessment. These are, of course, our own value-laden assessments of the positions of others with whom we have no familiarity other than through secondary sources. However, our assessments are based upon a broad review of the literature on the key issue. Whilst we acknowledge the subjectivity of our value/objectives attributions to the stakeholders, we propose that our commitment to seeing the world through the eyes of these others and to having an intense focus on stakeholder values and interests brings some likelihood of our assessments holding some degree of validity (cf. Wright and Goodwin, 2009).

The decision analysis framework of Wright and Cairns (2011) is directed at assessing the strength and robustness of organizational strategies across different scenarios. Here, we consider the interplay of

the objectives and power of multiple stakeholders. Whilst strategies can be developed by organizations that consider the interests of others – for example, in consideration of an organization's corporate social responsibility – we have shown that our augmentation of Critical Scenario Method provides a nuanced consideration of the power and objectives of all concerned stakeholders. This analysis allows a comprehensive appreciation of the dynamic interplay between self-interested actions of stakeholder groupings and an unfolding future.

We propose that our framework has potential value both in the classroom and boardroom; as a means of exploring complex business issues and assessing strategic options; and in broad society, for engaging with the impact of organizational strategy and action across all stakeholders.

References

Cairns, G., Global logistics and the whole-of-life supply chain: The consumption society and end-of-life ships, Working papers in sustainable organizations and work, Working paper no. 1, RMIT University, Melbourne, 2012.

Cairns, G. Śliwa, M. G. Wright, Problematizing international business futures through a 'critical scenario method', Futures, 42 (2010) 971–979.

Flyvbjerg, B. Making social science matter: why social inquiry fails and how it can succeed again, Cambridge University Press, Cambridge, 2001.

Flyvbjerg, B. Making organization research matter: power values and phronesis, in B. Czarniawska and G. Sevón (eds.) The northern lights: organization theory in Scandinavia, Liber Abstrakt – Copenhagen Business School Press, Copenhagen, 2003, 357-382.

Freeman, R.E. The politics of stakeholder theory: some future directions, Business Ethics Quarterly (4) 4 (1994) 409-421.

Goodwin, P., G. Wright. Enhancing strategy evaluation in scenario planning: a role for decision analysis, Journal of Management Studies, 38 (2001) 1-16.

Goodwin, P., G. Wright, Decision Analysis for Management Judgment, 4th ed., Wiley, Chichester and New York, 2009.

Jungermann, H., M. Thuring. The use of mental models for generating scenarios, in G. Wright and P. Ayton (eds.) Judgmental Forecasting, Wiley, London, 1987.

Kirby, A. Sci-Tech: Brent Spar's long saga, BBC News, 1998, available at http://news.bbc.co.uk/2/hi/science/nature/218527.stm, accessed 4 May 2012

Maersk, Ship recycling, undated, available at http://www.maersk.com/Sustainability/EnvironmentAndClimate/Pages/ShipRecyclingAndWasteHandling.aspx, accessed 10 January, 2011.

Wright, G., G. Cairns. Scenario thinking: practical approaches to the future, Palgrave, London, 2011.

Wright, G. and P. Goodwin Decision making under low levels of predictability: enhancing the scenario method, International Journal of Forecasting, 2009, 25, 813-25.

Scenario Stakeholders/Objectives	Global Cooperation:	World Divided	Goes Alone	Business-As-Usual
GlobeTrade i)	1	2	3	4
GT ii)	4	3	2	1
GT iii)	4	3	2	1
GreenWorld iv)	1	2	3	4
Workers v)	3	2	4	1
W vi)	1	2	4	3
W vii)	1	3	2	4

Table 1: *Ranking of achieved objectives across the scenarios*

Scenario Stakeholders	Global Cooperation:	World Divided	Goes Alone	Business-As-Usual
GlobeTrade	2	2	1	1
GreenWorld	1	1	2	2
Workers	3	3	3	3

Table 2: *Ranking of relative power bases for stakeholder groups within scenarios*

Scenario Stakeholders/Objectives	Global Cooperation:	World Divided	Goes Alone	Business-As-Usual
GlobeTrade i)	-1	0	2	3
GT ii)	2	1	1	0
GT iii)	2	1	1	0
GreenWorld iv)	0	1	1	2
Workers v)	0	-1	1	-2
W vi)	-2	-1	1	0
W vii)	-2	0	-1	1

Table 3: *Calculation of objective/power indices*